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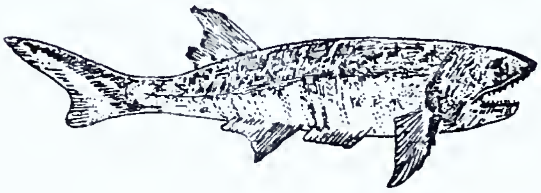
PENNSYLVANIA GEOLOGICAL SURVEY
Harrisburg, Penna.
Arthur A. Socolow, *State Geologist*

FIELD TRIP GUIDE

Fossil Collecting

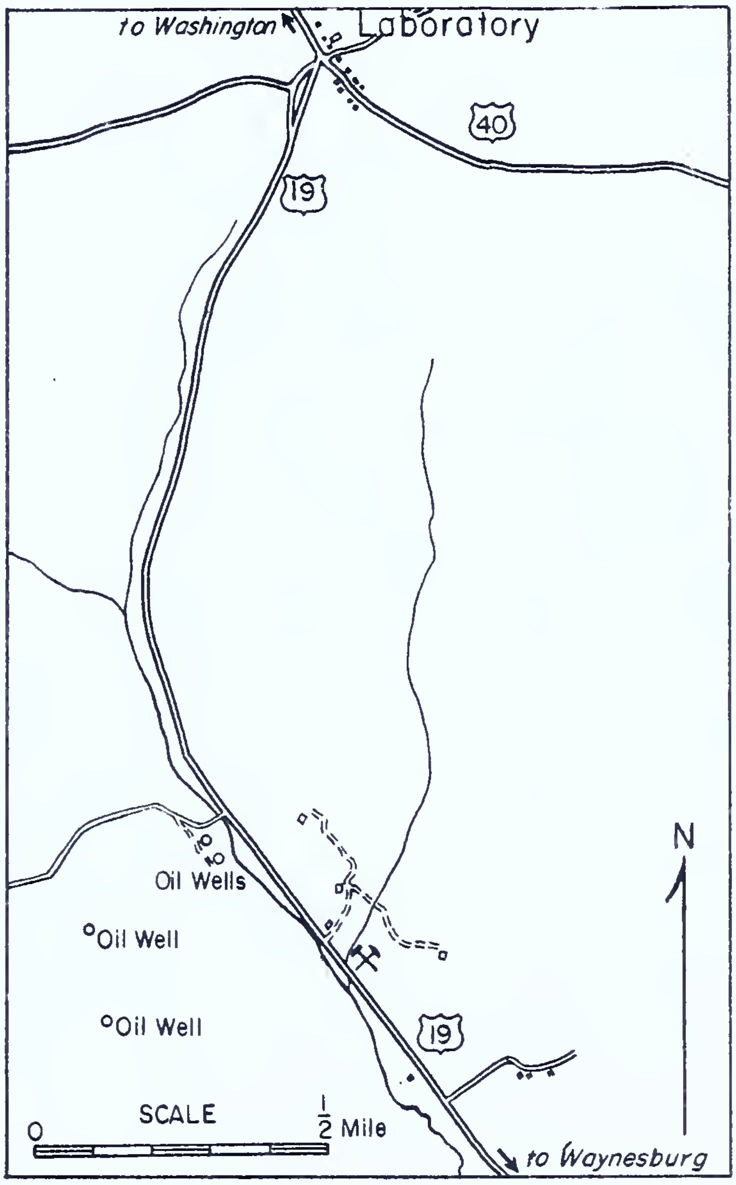
WASHINGTON COUNTY



DEPARTMENT OF INTERNAL AFFAIRS
Genevieve Blatt, *Secretary*

A COLLECTING LOCALITY FOR FOSSIL FISH TEETH

Location--A small abandoned quarry on the east side of U.S. 19, 1.7 miles south of the intersection of U.S. Routes 40 and 19 in Washington County is a site where some rare fossils may be found. Consult the map for more detailed directions. Because the quarry is now part of a pasture and is accessible only by crossing over a fence, it would be advisable to secure permission from the owner before entering. Because the fossils are quite small, a magnifying lens of about 10 power is a necessary tool for collecting at this locality.

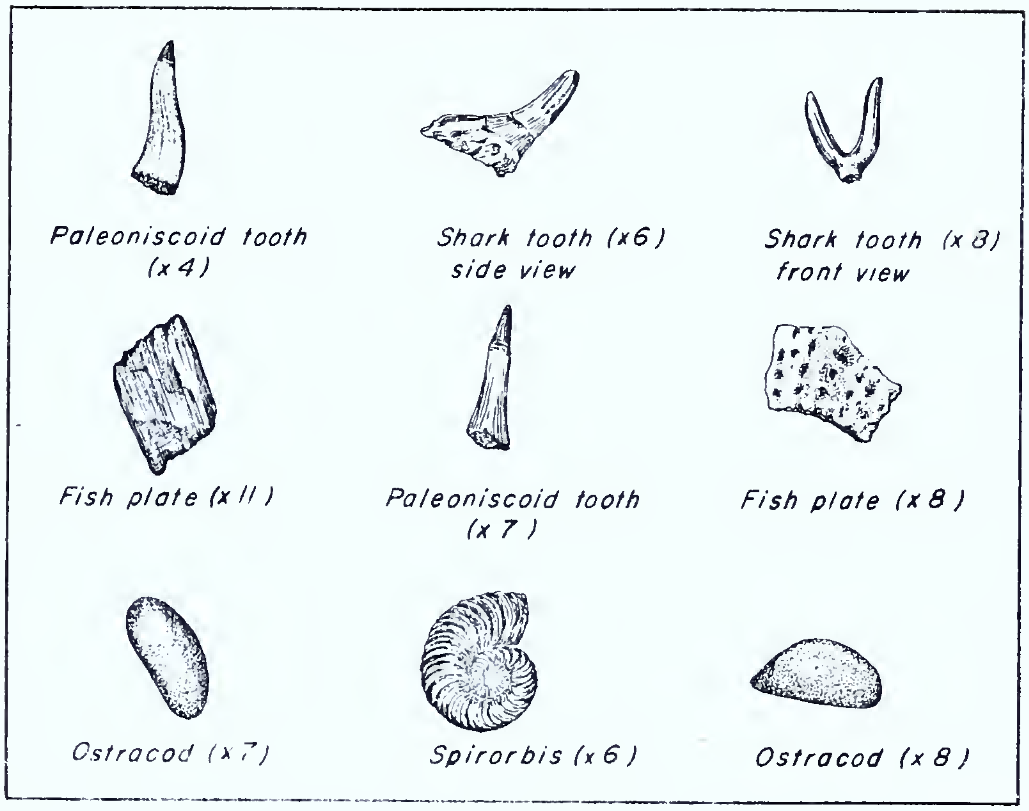


Fossils--Three types of fossils that may be found at this site are illustrated in the accompanying drawings. The X followed by a number indicates how many times larger the figure is than the actual fossil.

The fossils to be found are: 1. worm shells--small coiled shells, much like a snail, which housed a worm called Spirorbis (class Polychaeta); 2. ostracods--small pea-shaped shells that contained tiny crustaceans. Although having little resemblance to crabs and lobsters (class Crustacea), the ostracods are their relative. This relation is proved by the fact that living ostracods bear several sets of jointed legs similar to the legs of crabs and lobsters; 3. fish teeth--the single teeth and bony plate fragments found here belong to a genus of paleoniscoid fish (class Osteichthyes); the two-pronged teeth are from sharks (class Chondrichthyes).

Geology--The rock in which the fossils are found is called the Upper Washington Limestone. It is part of the Washington Formation, a series of flat-lying, upper Paleozoic Era (Permian System) sandstones, shales, and limestones that underlies most of the region.

In the quarry the ostracods are common in the limestone and shaly interlayers; the fish teeth and worm shells are found in the shaly interlayers. The best place to look for fish teeth is on some of the large blocks on the quarry floor and at the top of the uppermost limestone layer in the quarry wall.



Paleoniscoid tooth (x 4)

Shark tooth (x6) side view

Shark tooth (x 8) front view

Fish plate (x 11)

Paleoniscoid tooth (x 7)

Fish plate (x 8)

Ostracod (x 7)

Spirorbis (x 6)

Ostracod (x 8)

Washington Limestone Fossils

The Fossils found in the limestones and shales plus the plant fragments and coal found in overlying and underlying rocks indicate that these rocks were probably formed in fresh water lakes and swamps.